

ABSTRACT

An MRAM cell and a method of forming the an MRAM cell minimizes the occurrence of electrical shorts along the side walls of the stacked cell structure during fabrication. Specifically, a first conductor is provided in a trench in an insulating layer, and then an upper surface of the insulating layer and the first conductor are planarized. Next, as the layers forming the stacks of the MRAM cells are deposited on the planarized insulating layer and first conductor, the critical layers are physically separated from adjacent layers at regions surrounding an interior region of the stacked layers. The stacked layers at the interior region form an MRAM cell, while the separated edges prevent conductive layers from being formed along the sidewalls of the MRAM cell due to sputtering during the etching process(es) performed to define the cell.